CLAIMS

1. An apparatus for resurfacing skin using biocompatible materials, comprising:

a particle generator for forming particles of a biocompatible material, wherein said biocompatible material is selected from the group consisting of frozen H_20 and dry ice;

a delivery system for delivering said particles from said particle generator to a skin surface; and

means for propelling said particles through said delivery system to said skin surface, wherein said means for propelling said particles includes a carrier gas for carrying said biocompatible particles.

2. The apparatus of claim 1, wherein the particle generator comprises a holding tank for containing said biocompatible material, cooling means for cooling said biocompatible material to produce cooled material, and means for forming solid particles of a selected size from said cooled material.

3. The apparatus of claim 1, wherein said particle generator comprises a holding tank for containing said biocompatible material in a liquid state, and means to inject microdroplets of said material into said carrier gas.

4. The apparatus of claim 1, wherein said carrier gas is under a pressure greater than atmospheric pressure.

5. The apparatus of claim 1, further comprising a vacuum system operatively connected to said delivery system.

6. The apparatus of claim 1, wherein said carrier gas comprises a gas selected from the group consisting of dry air, nitrogen, argon, helium, neon and carbon dioxide.

7. The apparatus of claim 1, further comprising means for controlling a delivery rate of said carrier gas.

8. The apparatus of claim 1, further comprising means for controlling a rate at which said particle generator produces said particles.

9. The apparatus of claim 1, wherein said biocompatible particles comprise at least one additive compound selected from the group consisting of a hormone, an anesthetic compound, an antibiotic, a drug and a vaccine.

10. The apparatus of claim 9, wherein said additive compound comprises solid particles.

11. The apparatus of claim 9, wherein said additive compound comprises liquid droplets.

12. The apparatus of claim 1, wherein said means for propelling said particles includes means for propelling said particles at a velocity that is sufficient to disrupt epidermal and dermal layers of said skin to a desired penetration depth.

13. The apparatus of claim 1, further comprising means for monitoring a temperature of said skin during impact of said particles.

14. The apparatus of claim 1, wherein said particle generator includes means for forming said particles at a size that is less than about 250 microns.

15. The apparatus of claim 1, wherein said particle generator includes a grinder for forming said particles.

16. The apparatus of claim 1, further comprising means for monitoring a temperature and a pressure of said carrier gas.

17. The apparatus of claim 1, further comprising means for controlling a size of said particles.

18. The apparatus of claim 1, further comprising means for controlling the flow of said carrier gas.

19. The apparatus of claim 1, further comprising means for monitoring the flux of said biocompatible particles on said skin.

20. The apparatus of claim 1, wherein said particles comprise drugs for treatment of pre-cancerous or cancerous skin legions.